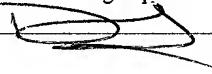


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PATENT APPLICATION
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FREEZER ORGANIZATION SYSTEM

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FREEZER ORGANIZATION SYSTEM

FIELD OF THE INVENTION

The present invention relates generally to storage organization systems for use in confined spaces. Specifically, the present invention relates to a method and apparatus for organizing and storing articles in freezers, particularly chest freezers.

BACKGROUND OF THE INVENTION

The development of cooling storage appliances, such as refrigerators and freezers, for home use has revolutionized ways of life in developed nations. Freed from the necessity of obtaining foodstuffs daily, people living in cultures in which such appliances are commonplace enjoy amounts of leisure time that were formerly unimaginable.

As refrigerators and freezers have evolved through the decades, they have assumed generally parallelepipedal configurations with hinged closure members, for reasons concerning space efficiency and compatibility with standard room and cabinet structure. Unfortunately, standard configurations do not optimize access to the appliance interior. This is particularly true with appliances that open from the top, such as so-called "chest" freezers. It is likely that every user of a chest freezer has spent time bent over at the waist with half of his body in the freezer interior, searching in vain with cold-numbed fingers for the elusive roast that he knows is "in there somewhere". It is therefore apparent that the need for an improved organizational system for appliance interiors is long-felt.

Container systems are known in other contexts. For example, U.S. Patent No. 4,416,374 is directed to a nest-or-stack, lidless, open-stacking container for handling and storage of bulk material such as food products. The container features a seamless, one piece plastic construction with channels formed into the bottom to permit the use of a forklift truck for moving, lifting and stacking of the container, and with stacking surfaces for stacking filled containers and nesting stop surfaces for

nesting empty containers.

In another example, U.S. Patent No. 5,752,602 to Ackermann shows a stackable and nestable container having a bottom surface, a first pair of opposed end walls integrally joined with the bottom surface and extending upwardly away therefrom, and a second pair of opposed side walls integrally joined with the bottom surface and extending upwardly away therefrom. The first and second pairs of opposed end walls and side walls are integrally joined with each other along common end surfaces thereof to form with the bottom surface a substantially rectangular open top container. Each of the end walls and side walls includes a pair of column sections, and each of the column sections includes a recessed portion, an inner shelf and a lower column support. Each of the end walls and side walls further includes a pair of stacking sections, and each of the stacking sections includes a stacking foot and a stacking shelf. The stackable and nestable container is adapted to be nestable with a similarly shaped container when the containers are disposed in a first orientation and the stackable and nestable container is adapted to be stackable with a similarly shaped container when the containers are disposed in a second orientation.

Despite the advantages of known containers, it can be seen that the need exists for a simple, inexpensive, container system for effectively and efficiently storing articles in appliance interiors that provides easy retrieval access.

SUMMARY OF THE INVENTION

These and other objects are achieved by providing a storage and organization system and method of storing articles in appliances defining an interior space having a predetermined height, width, and depth. A plurality of containers are provided, each of the containers being adapted and constructed to receive articles to be stored in the appliance. Each of the containers has a substantially open top, and a height such that a plurality of containers can be stacked atop one another within the height of the interior of the appliance, a width such that a plurality of containers can be placed adjacent one another within the width of the interior of the appliance, and a depth such that a plurality

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of containers can be placed adjacent one another within the width of the interior of the appliance. Articles to be stored in the appliance are placed in the containers, and the containers adjacent to one another, and stacked atop one another, in the interior of the appliance.

5 In an embodiment, the containers can be provided with a first orientation in which the containers can be stacked atop one another, and a second orientation in which the containers nest into one another. The containers are suitable for use in cooling appliances, such as chest freezers, and can be fabricated from a suitably durable and temperature-adaptable material

10 Thermoplastic material such as polypropylene had been found to provide particular advantages.

15 The containers can be constructed with a peripheral flange adapted and constructed to facilitate handling of the container by a user. One or more cutout sections can be formed in the flange of each container to further enhance handling.

20 The features of the invention believed to be patentable are set forth with particularity in the appended claims. The invention itself, however, both as to organization and method of operation, together with further objects and advantages thereof, may best be understood by reference to the following description taken in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIGURE 1 is a schematic perspective view of a container constructed in accordance with the principles discussed herein.

25 FIGURE 2 is a plan view of the container illustrated in FIG. 1.

FIGURE 3 is a front view of the container illustrated in FIG. 1.

FIGURE 4 is a side view of the container illustrated in FIG. 1.

25 FIGURE 5 is a plan view of containers arranged in an appliance in accordance with the principles discussed herein.

30 FIGURE 6 is a front sectional view of containers arranged in an appliance in accordance with the principles discussed herein.

FIGURE 7 is a plan view of containers arranged in an appliance in accordance with an alternative embodiment of the principles discussed herein.

DETAILED DESCRIPTION OF THE INVENTION

While this invention is susceptible of embodiment in many different forms, there is shown in the drawings, and will herein be described in detail, exemplary embodiments, with the understanding that the present disclosure is to be considered as illustrative of the principles of the invention and not intended to limit the invention to the exemplary embodiments shown and described.

A container 10 for use in accordance with the principles of the present invention is shown in FIGS 1-4. The container 10 is generally parallelepipedal in form, having a bottom 12, a front wall 14, a rear wall 16, and two sidewalls 18, 20. The container 10 has an open top 22 to provide easy access to article placed within the container.

A peripheral flange 24 surrounds the open top 22 of the container 10, providing a gripping surface to facilitate handling of the container 10 by a user. At least one cutout portion, here illustrated as a pair of cutout portions 26, 28, is provided in the peripheral flange 24. The cutouts 26, 28 further enhance container handling by providing grip access when multiple containers are stacked side-by-side or against an appliance wall.

A first pair of indents 30, 32 extend into the container 10 from the rear wall 16. A second pair of indents 34, 36 extend into the container 10 from the front wall 14. The indents 30-34 provide additional stiffness to the container walls in which they are formed. In addition, the first pair of indents 30, 32 are

spaced closer together than the second pair of indents 34, 36. This provides the containers with the ability to nest and stack. Specifically, when containers are placed atop one another with similarly spaced indents out of alignment with one another, multiple containers can be stacked atop one another. By contrast, when 5 containers are placed atop one another with similarly spaced indents in alignment with one another, multiple containers nest into one another.

FIGS 5 and 6 illustrate a plurality of containers C, similar to container 10 shown in FIGS 1-4, arranged in an appliance A, here illustrated as a top-opening chest freezer. The appliance A defines an interior space having a predetermined height H, width W, and depth D. In the case of chest freezers, these dimensions 10 vary surprisingly little from manufacturer to manufacturer, and depend largely upon freezer capacity.

Each of the containers C has a height H1, H2, H3 such that a plurality of containers C can be stacked atop one another within the height of the interior of the appliance A. The containers C have respective widths W1, W2, and W3 such that a plurality of containers C can be placed adjacent one another within the width of the interior of the appliance A. Similarly, the containers C have a depth D1 such that a plurality of containers C can be placed within the interior 15 of the appliance A. The open tops of the containers C permit easy visual and physical access to the contents of each container, while the flanges and cutouts provide ease of handling. Thus, the contents of the appliance A can be simultaneously organized and easily accessible. The dimensions of the containers C should be chosen to fit into standard dimensions of appliances for which they 20

are intended. For example, in the United States, the interior of standard chest
freezers typically have a depth of approximately 18 to 22 inches, and a height of
approximately 20 inches. The width of standard U.S. chest freezers vary with
the capacity of the freezers, from approximately 28 inches for a 9 or 13 cubic
foot unit, to approximately 60 inches for a 23 cubic foot unit. It has been found
that a container having a height of approximately seven inches, a width of
approximately 12 inches, and a depth of approximately 20 inches is suitable for
use in a variety of freezer sizes.

An alternative embodiment of the principles of the present invention is
shown in FIG. 7. The depth D2 of the containers C1 is chosen such that a
plurality of containers C1 fit within the depth DA of the appliance A1. This
configuration can be of particular utility in commercial or custom freezers having
non-standard depth, or where containers having lesser depth are desired. It is
also contemplated that the other dimensions of the containers and/or appliances
can be varied accordingly.

Although the present invention has been described with reference to
specific embodiments, those of skill in the art will recognize that changes may
be made thereto without departing from the scope and spirit of the invention as
defined by the appended claims.